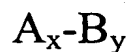
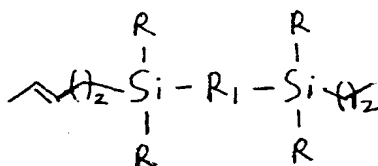


1. A molecule comprising a polymer comprising the structure:



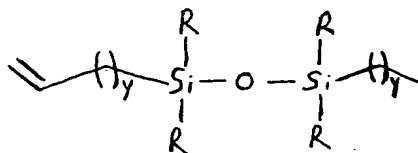
wherein A is a carbosilane comprising a latent reactive group bonded to Si, B is a carbosiloxane, x is an integer greater than or equal to 1, and y is an integer greater than or equal to 1.

2. The molecule of claim 1, wherein the latent reactive group is a hydrogen, an alkoxy group, a phenoxy group, or a halogen atom.
3. The molecule of claim 2, wherein the latent reactive group is a methoxy group.
4. The molecule of claim 1, wherein the carbosilane has the structure:



wherein R is a latent reactive group, R_1 is a hydrocarbon chain containing at least one carbon, and z is an integer greater than or equal to 1.

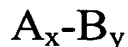
5. The molecule of claim 1, wherein the carbosiloxane has the structure:



wherein R is a functional group and y is an integer greater than or equal to 1.

6. The molecule of claim 1, wherein the molecule comprises the structure of compound 3.

7. The molecule of claim 1, wherein the molecule comprises at least two polymers each comprising the structure:



wherein the at least two polymers are internally crosslinked via at least one Si-O-Si linkage.

8. The molecule of claim 7, wherein the molecule comprises the structure of compound 4.

9. The molecule of claim 1, wherein the polymer comprises the structure:



wherein C is a chain-end crosslinking molecule and z is an integer greater than or equal to 1.

10. The molecule of claim 9, wherein the chain-end crosslinking molecule is selected from the group consisting of compounds 5 and 6.

11. The molecule of claim 10, wherein the polymer comprises the structure of compound 7.

12. The molecule of claim 10, wherein the polymer comprises the structure of compound 10.

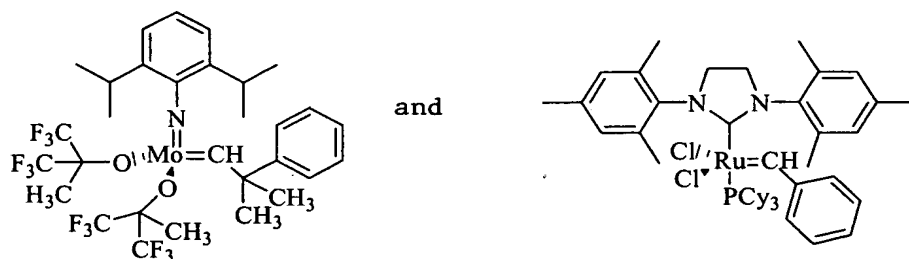
13. The molecule of claim 9, wherein the molecule comprises at least two polymers comprising the structure:



wherein the at least two polymers are internally crosslinked via at least one Si-O-Si linkage and chain-end crosslinked.

14. The molecule of claim 13, wherein the molecule comprises the structure of compound 8.

15. The molecule of claim 13, wherein the molecule comprises the structure of compound **11**.
16. A method of making the molecule of claim 1, the method comprising the steps of:
- (a) preparing a reaction mixture comprising a carbosiloxane monomer, a carbosilane monomer, and an ADMET catalyst; and
 - (b) placing the reaction mixture under conditions that result in the production of the molecule of claim 1.
17. The method of claim 16, wherein the reaction mixture comprises the carbosilane monomer and the carbosiloxane monomer in a molar ratio of between about 1:5 and 1:100.
18. The method of claim 17, wherein the molar ratio is less than about 1:7.
19. The method of claim 16, wherein the reaction mixture comprises the monomers and ADMET catalyst in a molar ratio of between about 1:1 and about 1:5000.
20. The method of claim 19, wherein the reaction mixture comprises the monomers and ADMET catalyst in a molar ratio of between about 1200:1 and about 100:1.
21. The method of claim 16, wherein the reaction mixture further comprises a chain-end crosslinking molecule.
22. The method of claim 21, wherein the reaction mixture comprises the carbosilane monomer, the carbosiloxane monomer, and the chain-end crosslinking molecule in a molar ratio of about 1-100:1-100:1-100.
23. The method of claim 21, wherein the carbosilane monomer and the chain-end crosslinking molecule comprise less than 20 mole percent of the reaction mixture.
24. The method of claim 16, wherein the catalyst is selected from:



25. The method of claim 16, wherein the step (b) comprises placing the reaction mixture under dry conditions.

26. The method of claim 16, wherein the step (b) comprises placing the reaction mixture in an argon atmosphere.

27. The method of claim 16, wherein the step (b) comprises subjecting the reaction mixture to a vacuum force.

28. The method of claim 16, wherein the step (b) comprises adding heat to the reaction mixture.

29. The method of claim 25, wherein the step (b) results in the production of a non-cross-linked polymer.

30. The method of claim 29, further comprising exposing the non-cross-linked polymer to water to form a cross-linked polymer.

31. The method of claim 30, wherein the water is atmospheric moisture.